MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2022/2023

DOM5214 – OPERATIONS MANAGEMENT

(All sections / Groups)

12 JULY 2023
9:00 AM – 11:00 AM
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **TWO (2)** pages excluding cover page with **FIVE (5)** questions only.

2. Attempt **ALL** the questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please write all your answers in the answer sheet provided.

ANSWER ALL QUESTIONS

QUESTION 1

a) Strategic decisions are significant choices made by organisations that shape the overall direction and long-term success of the business. Provide and explain any **FOUR (4)** key strategic decisions of operations management.

(8 marks)

b) State and explain **THREE (3)** common strategies that a company can apply to gain a competitive advantage. Provide one example for each strategy.

(12 marks)
(Total: 20 marks)

QUESTION 2

a) Robust Design and Modular Design are two distinct approaches in the field of product development. Distinguish these two approaches based on their objectives. Give one example for each approach.

(6 marks)

b) How does Just-in-Time (JIT) differ from traditional inventory management systems? List down FIVE (5) benefits of implementing a Just-in-Time approach in manufacturing?

(14 marks)
(Total: 20 marks)

QUESTION 3

a) You are the Operations Manager for XYZ Sdn Bhd, a manufacturer of power cables for automotive industry. As part of expansion plan, the company wanted to open new manufacturing facility. You are evaluating potential locations for a new manufacturing facility. You have identified three key factors that will impact your decision: Labour Availability, Infrastructure, and Cost of Living. Calculate the weighted scores for each location using the template below.

Key Factors	Weight	SCORES (OUT OF 5)			WEIGHTED SCORES		
		Location A	Location B	Location C	Location A	Location B	Location C
Totals							

Additional information:
Factors:
Labour Availability (weight: 40%) = Location A: 4; Location B: 3; Location C: 5
Infrastructure (weight: 30%) = A: 3; Location B: 4; Location C: 4
Cost of Living (weight: 30%) = A: 2; Location B: 3; Location C: 5

(10 marks)

Continued .....

b) Explain in detail any **FIVE (5)** of the key drivers behind the decision to pursue vertical integration by a company.

(10 marks)
(Total: 20 marks)

QUESTION 4

a) A company uses 1,000 units of a particular product each year. The ordering cost is RM100 per order, and the carrying cost is RM2 per unit per year. The product's purchase price is RM10 per unit. What is the Economic Order Quantity (EOQ) and how many orders per year should the company place to minimise costs?

$$Q^* = \sqrt{\frac{2DS}{H}}$$

$$\text{Expected number of orders} = N = \frac{\text{Demand}}{\text{Order quantity}} = \frac{D}{Q^*}$$

(6 marks)

b) Suggest and explain **SEVEN (7)** wastes that the company should eliminate based on Ohno's waste principles.

(14 marks)
(Total: 20 marks)

QUESTION 5

a. Define forecasting in the context of operations management. Discuss the **THREE (3)** common types of forecasting.

(10 marks)

b. Aggregate planning involves making decisions about capacity to meet the anticipated demand. Explain any **FIVE (5)** capacity options commonly considered in aggregate planning.

(10 marks)
(Total: 20 mark)

(FULL: 100 Marks)

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